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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,150	06/20/2003	Thomas H. Ottenheimer	10019119-4	7128

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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
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EXAMINER

DO, AN H

ART UNIT	PAPER NUMBER
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2853

DATE MAILED: 08/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/601,150	Applicant(s) OTTENHEIMER ET AL.	
	Examiner An H. Do	Art Unit 2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6/20/03 & 12/22/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statements (IDS) submitted on 20 June 2003 and 22 December 2003 were filed and are being considered by the examiner.

Specification

2. The disclosure is objected to because of the following informalities:

-On page 2, paragraph [0001], in the last line, replace "and issued as patent number____." with --now abandoned.--

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-8, 10-14, 17, 19-21 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Baughman et al (US 5,441,593).

Regarding claim 1, Baughman et al disclose the following claimed features:

A print head (Figures 4A-4D) comprising:

-a slot (18) received in a substrate (12, column 5, lines 51-55) and having a central region (18') and one or more terminal regions (18a, column 4, lines 56-59), the slot extending along a long axis (Figure 3) that extends through at least a portion of the central region and the one or more terminal regions, the central region extending, at

least in part, along a pair of sidewalls, and individual terminal regions being defined by a terminal sidewall at least a portion of which extends away from both sidewalls of the central region (column 5, lines 59-60; column 6, lines 8-15).

Regarding claim 2, wherein the one or more terminal regions comprises two terminal regions (formed by 18a on both sides of the slot, see Figure 4C).

Regarding claim 3, wherein portions of each of the terminal regions extend away from both sidewalls of the central region (as seen in Fig. 4C).

Regarding claim 4, wherein individual sidewalls of the pair of sidewalls are generally parallel to one another (as seen in Fig. 5C).

Regarding claims 5 and 11, wherein at least a portion of the terminal sidewall is generally perpendicular to both sidewalls of the central region (as seen in Figs. 4C and 5C).

Regarding claim 6, wherein at least a portion of the terminal sidewall extends arcuately away from both sidewalls of the central region (as seen in Figs. 4C and 5C).

Regarding claim 7, wherein individual terminal regions are generally circular (as seen in Figs. 4C and 5C).

Regarding claim 8, wherein individual terminal regions are generally rectangular.

Regarding claim 10, a slotted substrate (12, column 5, lines 51-55) for use in a fluid ejecting device (10) comprising: a substrate (12); and, a slot (18) received in the substrate (12) and having a central region (18') and two or more terminal regions (formed by 18a on both sides of the slot), the central region extending at least in part along a pair of sidewalls, individual terminal regions being defined by a terminal sidewall

at least a portion of which extends away from both sidewalls of the central region (column 5, lines 59-60; column 6, lines 8-15), wherein the two or more terminal regions (18a) are terminally joined with a common sidewall (Figure 4C).

Regarding claim 12, a structure (Figures 4A-4D) comprising: a substrate (12) extending between a first surface (top surface of 12) and a generally opposing second surface (bottom surface of 12); a slot portion (18) received in the substrate (12) and extending along a long axis (Figure 3) which is generally parallel to the first and second surfaces, the slot portion (18) having a central region (Figure 3, element 18') and a pair of terminal regions (Figure 3, two rows of portions 18a) through which the long axis passes; and, the central region (18') extending along a pair of sidewalls (walls of 18a) that lie along individual planes that are generally parallel, the planes defining a space therebetween, and at least one terminal region of the slot portion being defined, at least in part, by one or more sub-regions that lie outside of the space between the planes.

Regarding claim 13, wherein the slot portion comprises a slot (18) that extends entirely (Figure 4C) through the substrate (12).

Regarding claim 14, wherein individual sub-regions (portions formed of 18a) lie on opposite sides of the planes (Figure 4D).

Regarding claim 17, a print head (Figures 4A-4D) comprising: a substrate (12) extending between a first surface (top surface of 12) and a generally opposing second surface (bottom surface of 12); and, a slot (18) received in the substrate (12) and having a central region (Figure 3, element 18') and a pair of terminal regions (Figure 3, two rows of portions 18a), the central region (18') extending along a pair of sidewalls which

extend between the first surface (top surface of 12) and the second surface (bottom surface of 12) and that lie along individual planes that are generally parallel (Figure 5C), the planes defining a space therebetween, and at least one terminal region (18a) of the slot (18) being defined, at least in part, by one or more sub-regions (18a) that lie outside of the space between the planes (Figure 3).

Regarding claim 19, a slotted substrate (Figures 4A-4D) comprising: a substrate (12); a slot (18) received in the substrate (12) and extending along a long axis (Figure 3), the slot (18) having a central region (18') and one or more terminal regions (18a) through which the long axis extends, the central region (18') extending, at least in part, along a pair of sidewalls (walls of 18a), and individual terminal regions (18a) being defined by a terminal sidewall at least a portion of which extends away from a sidewall of the central region (18') at an angle of greater than 180 degrees (Figure 4D).

Regarding claim 20, wherein the portion of the terminal sidewall (wall of 18a) is planar (Figure 1 showing portion of wall 18a is planar).

Regarding claim 21, wherein the portion of the terminal sidewall is arcuate (Figure 4C, where portion of 18a is rounded).

Regarding claim 23, a fluid ejecting device (drop ejecting element 10) incorporating the slotted substrate (column 3, line 54).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 9, 16, 18 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baughman et al (US 5,441,593) in view of Keefe et al (US 5,953,029).

Baughman et al do not disclose the following claimed feature:

- A print cartridge incorporating the print head or slotted substrate.

Keefe et al teach the following:

- A print cartridge (10) incorporating the print head or slotted substrate (28), for the purpose of continuously supplying ink from an ink reservoir to the printhead.

It would have been obvious at the time the invention was made to a person having ordinary skill in the inkjet art to modify Baughman et al. by providing a cartridge as taught to be old by Keefe et al. for the purpose of continuously supplying ink from an ink reservoir to the printhead.

7. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Baughman et al (US 5,441,593) in view of Garcia (US 5,317,346).

Baughman et al do not disclose the following claimed feature:

- wherein the terminal regions are generally circular when viewed from above the first surface.

Garcia teaches the following:

- wherein the terminal regions (both ends of trench 15) are generally circular (Figure 2, where trench 15 is rounded) when viewed from above the first surface (top

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view), for the purpose of providing a compound ink feed slot through which the ink is supplied to the ink chambers (column 1, lines 59-62).

It would have been obvious at the time the invention was made to a person having ordinary skill in the inkjet art to modify Baughman et al. by providing general circular terminal regions as taught to be old by Garcia, for the purpose of providing a compound ink feed slot through which the ink is supplied to the ink chambers (column 1, lines 59-62).

Contact Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to An H. Do whose telephone number is 571-272-2143. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on 571-272-2149. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



AD
August 2, 2004

AS 211
Primary 8/04